

DOCKET: CU-3859

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Erich Gornick et al

Serial No.: 10/502,503

Group Art Unit:

Filed: July 23, 2004

Examiner:

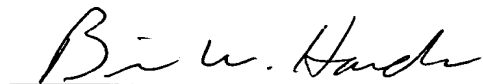
For: METHOD AND DEVICE FOR OPTICALLY TESTING SEMICONDUCTOR
ELEMENTS

THE COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT WITHIN THREE
MONTHS OF FILING OR BEFORE MAILING OF FIRST OFFICE ACTION**

The information disclosure statement submitted herewith is being filed within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of the first Office Action on the merits, whichever event occurs last. 37 CFR 1.97(b).

Date: October 13, 2004



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INFORMATION DISCLOSURE STATEMENT

Applicants submit herewith patents, publications or other information of which the applicants are aware, which may be material to the examination of this application and in respect of which there may be a duty to disclose under 37 CFR 1.56.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 CFR 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 1325, at 25.

The references submitted herein are listed on PTO-1449 form (modified) enclosed herewith. A copy of each reference listed is being furnished except any duplicate or cumulative patents or publications specified otherwise. Also, if the present application was filed after June 30, 2003, copies of US patents or published applications are not submitted in accordance with the USPTO Rule changes.

A translation of any foreign language reference, if any, is indicated in PTO-1449 form and being submitted herein if it is readily available. Otherwise it should be construed that such translation is not readily available.

Additional comments, if any, on the relevance of each reference listed are provided as follows:

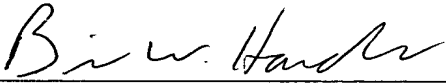
Also submitted herein is a copy of the International Search Report which satisfies the requirement for a translation or concise explanation of any non-English reference cited therein, as provided in MPEP §609 A(3).

The Statement is made on the basis of the information:

<u> </u>	supplied by the inventor(s);
<u> X </u>	supplied by an individual associated with the filing and prosecution
<u> </u>	of this application (37 CFR 1.56(c)); or
<u> </u>	in the attorney's file.

Respectfully submitted,

Date: October 13, 2004



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Form PTO-1449 (Modified)

FORM PTO-1449	ATTY. DOCKET NO.	SERIAL NO.
	CU-3859	10/502,503
	APPLICANT	
	Erich Gornick et al	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	FILING DATE	GROUP
	July 23, 2004	
(37 CFR 1.98(b))		

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	US	5 4 1 4 5 1 3	05/09/1995				
	US	4 9 5 7 3 6 7	09/18/1990				
	US	4 8 4 1 1 5 0	06/20/1989				
	US	5 2 2 9 3 0 3	07/20/1993				
	US	5 7 7 3 3 1 6	06/30/1998				
	US	6 1 8 1 4 1 6	01/30/2001				
	US	6 2 2 2 1 8 7	04/24/2001				
	US	4 6 8 2 6 0 5	07/28/1987				
	US	4 8 1 8 1 1 0	04/40/1989				

FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLA SS	SUB- CLASS	TRANSLATION YES I NO
	1	0 0 4 7 1 3 6	04/19/2001	German			
	WO	0 0 5 7 1 5 9	09/28/2000	PCT			
	1	9 8 4 0 7 2 5	03/18/1999	German			
	1	9 5 1 6 8 4 2	11/30/1995	German			
	EP	0 6 1 8 4 5 5	05/10/1994	EPO			
	WO	9 7 1 3 3 5 8	04/10/1997	PCT			
	GB	2 2 1 7 0 1 1	10/18/1989	United Kingdom			

OTHER DOCUMENTS (Including Author, Title, Date, Place of publication)

		DONALDSON W R ET AL: "Integrated circuit tester using interferometric imaging", Proceedings of the Ugim Symposium, Microelectronics Education for the Future Twelfth Biennial, University/Government/Industry, Microelectronics Symposium (Cat. No. 97CH36030), Proceedings of the Ugim Symposium, Microelectronics Education for the Future, page 107 XP010242546, 1997, New York, NY, USA, IEEE, Usa ISBN: 0-7803-3790-5, figure 1
		CARTWRIGHT A N ET AL: "Femtosecond interferometry for analysis of internal bond interface delamination in semiconductor devices" Technical Digest. Summaries of Papers Presented at the conference on lasers and electro-optics. Conference Edition. 1998 Technical Digest Series, Vol. 6 (IEEE Cat. No. 98CH36178), Technical Digest Summaries of Papers presented at the conference on Laser, pages 356-357, XP002239978, 1998, Washington, DC, USA, Opt. Soc. America, USA ISBN: 1-55752-339-0 figures 1-3
EXAMINER	DATE CONSIDERED	

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OTHER DOCUMENTS (Including Author, Title, Date, Place of publication)

		MCCAULLEY J.A. ET AL: "Temperature dependence of the near-infrared refractive index of silicon, gallium arsenide, and indium phosphide" vol. 49, no. 11 March 15, 1994
		NASSIM K ET AL: "High-resolution interferometry and electronic speckle pattern interferometry applied to the thermomechanical study of a MOS power transistor" Microelectronics Journal, Mackintosh Publications LTD. Luton, GB, vol 30, no. 11, November 1999, pages 1125-1128, XP004175865 ISSN: 0026-2692, figure 1
		PANICCIA MARIO ET AL: "Optical probing of slip chip packaged microprocessors" Intel Corporation, MS SC9-09 Santa Clara, California 95052, Received May 29, 1998 accepted September 16, 1998
		KOSKOWICH G.N. ET AL: "Voltage measurement in GaAs Schottky barriers using optical phase modulation" IEEE Electron L. S. vol 9, no. 9 September 1988
		SOREF RICHARD A. ET AL: "Electrooptical effects in silicon" vol. QE-23, No. 1, January 1987

OTHER DOCUMENTS (Including Author, Title, Date, Place of publication)

		HEINRICH, H.K. ET AL.: "Noninvasive sheet charge density probe for integrated silicon devices" Stanford University, Edward L. Ginzion Laboratory, Stanford California Received , Publication February 25, 1986
		GOLDSTEIN M. ET AL: "Heterodyn interferometer for the detection of electric and termal signals in integrated circuits through the substrate" Publication date May 14, 1993 Garching, Germany
		FURBOCK C. ET AL: "Interferometric temperature mapping during ESD stress and failure analysis of smart power technology ESD protection devices" IEEE Journal of Selected Topics in Quantum Electronics, Vol. 1, No. 4, December 1995
		HERMAN IRVING P.: "Real-time optical Thermometry during semiconductor processing" IEEE Journal of Selected Topics in Quantum Electronics, Vol. 1, no. 4, December 1995
		KREIS THOMAS: "Digital holographic interference-phase measurement using the Fourier-transform method" Vol. 3, no. 6, June 1986, J. Opt. Soc. Am. A
		TAKEDA, MITSUO ET AL: "Fourier-transform method of fringe-pattern analysis for computer-based topography and interferometry" J. Opt. Soc. Am., vol 72, no. 1, January 1982

OTHER DOCUMENTS (Including Author, Title, Date, Place of publication)

		MCMANUS M.K. ET AL: "PICA: Backside failure analysis of CMOS circuits using picosecond imaging circuit analysis" Microelectronics Reliability 40 (2000) 1353-1358
		KOLZER ET AL : Quantitative emission microscopy , J. Appl. Phys 71 (11), June 1, 1992
		SELIGER N. ET AL: "Time-resolved analysis of self-heating in power VDMOSFETs using backside laserprobing", Solid-State Electronics, Vol. 41, no. 9 pages 1285-1292, 1997
		HALL DOUGLAS C. ET AL: "Interferometric near-field imaging technique for phase and refractive index profiling in large-area planar-waveguide optoelectronic devices" December 1995, IEEE Journal of Selected Topics in Quantum Electronics, vol. 1, no. 4
		NAKADATE, SUEZOU "Vibration measurement using phase-shifting speckle-pattern interferometry" Applied Optics vol. 25, no. 22, November 15, 1986
		MONTGOMERY P C ET AL: "Phase-stepping microscopy (PSM): a qualification tool for electronic and optoelectronic devices" Semicond. Sci. Technol 7 (1992) A237-A242
		DEBOY G ET AL "Absolute Measurement of transient carrier concentration and temperature gradients in power semiconductor devices by internal IR-laser deflection" Microelectronic Engineering 31 (1996) 299-307
		SHAJENKO P. ET AL: "Applied Physics Letters" Vol. 13, no. 1, July 1, 1968
		KASAPI, STEVEN ET AL "Laser beam backside probing of CMOS integrated circuits" Microelectronics Reliability 39 (1999) 957-961
		SMITH, WALLACE B. ET AL: "Second Breakdown and Damage in Junction Devices" IEEE Transactions on Electron Devices, Vol. Ed-20, no. 8, August 1973
		"INTERFEROMETIRC MONITOR OF SUBSTRATE HEATING INDUCED BY PULSED LASER IRRADIATION" IBM Technical Disclosure Bulletin, IBM Corp. New York, US, vol. 31, no. 8, 1989, pages 214-219 XP000036937 ISSN: 0018-8689, figure 1